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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/817,429

04/05/2004

Shuhei Harada

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11/24/2006

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EXAMINER

FRANTZ, JESSICA L

ART UNIT

PAPER NUMBER

3746

DATE MAILED: 11/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/817,429

Applicant(s)

HARADA, SHUHEI

Examiner

Jessica L. Frantz

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 21-23 is/are rejected.
- 7) ☒ Claim(s) 11-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 9-10, and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Luedtke 5,897,300. Luedtke teaches the invention substantially as claimed including a tube pump comprising: a flexible tube 68 in which a fluid passage is formed; an accommodating case 26 for accommodating the flexible tube, the tube extending along an inner wall of the case figure 2, the inner wall having an opening 31 and 32 see fig 6, the tube extending to the exterior of the case through the opening, the tube having a first portion and a second portion left and right sides of tube, which are located close to each other in the vicinity of the opening; a pressing member 56 revolving in the accommodating case, the pressing member moving from the first portion to the second portion along the flexible tube while pressing and squeezing a portion of the tube against the inner wall of the case, thereby enabling a fluid to flow from the first portion to the second portion in the fluid passage; and an auxiliary member 64 provided in the vicinity of the opening of the accommodating case, the auxiliary member having an auxiliary surface 66, the auxiliary member transferring the pressing member from the second portion to the first portion via the auxiliary surface when the pressing member passes the vicinity of the opening of the case. Luedtke also

Art Unit: 3746

teaches when the auxiliary surface receives the pressing member from the second portion or passes the pressing member to the first portion, the auxiliary surface is connected smoothly with a portion of an outer circumferential surface of the flexible tube spaced from the inner wall figure 9. Also, Luedtke teaches the inner wall has a substantially circular shape figure 6 and the pressing member revolves around a revolution axis not labeled and the inner wall is, formed around the revolution axis figure 9. Luedtke further teaches the flexible tube includes a first extending portion not labeled extending from the first portion to the exterior of the accommodating case and a second extending portion not labeled extending from the second portion to the exterior of the case figure 8, and the pressing member decreases the pressure in the first portion to draw the fluid to the passage through the first extending portion and discharge the fluid through the second extending portion. Also, Luedtke teaches the auxiliary member is located between the first portion and the second portion figure 8 and the auxiliary member is formed from an elastic material. The accommodating case, which includes the auxiliary member, is disclosed as being formed of an elastic material column 3, lines 35-46 and further it is noted that all materials have some degree of elasticity and therefore all materials are elastic materials. Also, Luedtke teaches that when the auxiliary surface is free from the pressing force of the pressing member, the auxiliary surface extends substantially parallel with a plane that is extended from the inner wall of the accommodating case at the opening, and the auxiliary surface is located inward of the extended plane in the case figure 6. Also, Luedtke teaches the auxiliary member is fixed to the accommodating case figure 6 and the auxiliary member has a substantially

Art Unit: 3746

triangular cross-sectional shape and includes a first surface 76 opposing the first portion, a second surface 7 opposing the second portion, and the auxiliary surface figure 6 and also the first and second surfaces are concave curved surface figure 6.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Luedtke 5,897,300. Luedtke is discussed above and teaches the invention substantially as claimed but fails to explicitly disclose the resilient force of the auxiliary member is selected such that a reactive force of the flexible tube and the auxiliary member acting on the pressing member remains constant when the pressing member passes the vicinity of the opening. However, it has been determined that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33CCPA (Patents) 1250, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. Coe, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have selected the resilient force of the auxiliary member such that the reactive force of the flexible tube and the auxiliary member acting

Art Unit: 3746

on the pressing member remains constant when the pressing member passes the vicinity of the opening in order to allow the auxiliary member to have the option of multiple levels of resilience in order provide a constant reactive force on the flexible tube to provide for a smooth fluid flow with minimal interruptions for increased efficiency.

5. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luedtke 5,897,300 in view of Becher 2,899,905. Luedtke is discussed above and teaches the invention substantially as claimed but fails to explicitly disclose a portion of the flexible tube accommodated in the accommodating case forms an omega shape and further the pressing member revolves around the revolution axis, wherein the flexible tube does not have overlapped portions in the accommodating case with respect to the revolution axis. Becher teaches a portion of the flexible tube 30 accommodated in the accommodating case 11 and 12 forms an omega shape figure 1 and further the pressing member 29 revolves around the revolution axis not labeled, wherein the flexible tube does not have overlapped portions in the accommodating case with respect to the revolution axis in order to ensure a uniform load to the driving motor column 2, lines 50-65. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the invention of Luedtke with the tube configuration of Becher in order to ensure a uniform load to the driving motor column 2, lines 50-65.

Allowable Subject Matter

6. Claims 11-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments, see pages 9-10, filed 10/17/2006, with respect to the rejection(s) of claim(s) 1-10, 20, 22, and 23 under D'Arcey 2,988,001 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Luedtke 5,897,300 and Becher 2,899,905.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica L. Frantz whose telephone number is 571-272-5822. The examiner can normally be reached on Monday through Friday 8:30a.m.-5:00p.m. E.S.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on (571)272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3746

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jessica Frantz
JF 11/13/2006

Ehud Gartenberg

**EHUD GARTENBERG
SUPERVISORY PATENT EXAMINER**